

**Response under 37 C.F.R. 1.116**

Applicant: Mohammad M. Samii

Serial No.: 10/634,424

Filed: August 5, 2003

Docket No.: 200205843-6

Title: PHOTOSENSOR ACTIVATION OF AN EJECTION ELEMENT OF A FLUID-EJECTION DEVICE**REMARKS**

The following remarks are made in response to the Final Office Action mailed February 1, 2006. In that Office Action, the Examiner rejected claims 1-4, 10, 13, 14, and 23 under 35 U.S.C. §103(a) as being unpatentable over Maru et al., U.S. Patent No. 5,877,784 ("Maru") in view of Fujii et al., U.S. Patent No. 5,035,789 ("Fujii"). Claims 5-8 were rejected under 35 U.S.C. §103(a) as being unpatentable over Maru in view of Fujii as applied to claim 4, and further in view of Millman et al., publication entitled, "Microelectronics," Second Edition, McGraw-Hill, Inc., 1987 ("Millman"). Claims 11 and 12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Maru in view of Fujii as applied to claim 1, and further in view of Sueoka et al., U.S. Patent No. 6,024,439 ("Sueoka"). Claim 9 was rejected under 35 U.S.C. §103(a) as being unpatentable over Maru in view of Fujii as applied to claim 1, and further in view of Tamura et al., U.S. Patent No. 5,784,463 ("Tamura").

With this Response, Applicant respectfully traverses the Examiner's rejection of claims 1-14 and 23. Claims 1-14 and 23 remain pending in the application and are presented for reconsideration and allowance.

**35 U.S.C. §103**

The Examiner rejected claims 1-4, 10, 13, 14, and 23 under 35 U.S.C. §103(a) as being unpatentable over Maru et al., U.S. Patent No. 5,877,784 ("Maru") in view of Fujii et al., U.S. Patent No. 5,035,789 ("Fujii").

Independent claim 1 recites "a plurality of latches; and a plurality of junction photosensors, each junction photosensor coupled to one of the ejection elements via one of the latches". Maru does not teach or suggest a junction photosensor coupled to an ejection element via a latch, as recited in independent claim 1. Fujii also does not teach or suggest this limitation. The Examiner has not cited any reference that teaches or suggests a junction photosensor coupled to an ejection element via a latch as recited in independent claim 1. Maru and Fujii, either alone or in combination, do not teach or suggest each and every limitation of independent claim 1.

The Examiner indicated that it would have been obvious to modify the printhead assembly disclosed in Maru by replacing the shift register 105 (Maru at Figure 11) with the photodiodes D (Fujii at Figure 2) disclosed in Fujii. (Office Action at para. no. 1, pages 2-3).

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As Applicant has previously pointed out, the Federal Circuit has stated that "there must be some suggestion, motivation, or teaching in the prior art that would have led a person of ordinary skill in the art to select the references **and combine them in the way that would produce the claimed invention.**" *Karsten Manufacturing Corp. v. Cleveland Golf Co.*, 58 U.S.P.Q.2d 1286, 1293 (CAFC 2001) (emphasis added). There is no suggestion in this case to combine Maru and Fujii in a manner that would produce the claimed invention. There is no teaching or suggestion in Maru that it would be advantageous or desirable to replace the shift register 105 disclosed therein with photodiodes, such as the photodiodes D disclosed in Fujii. There is no teaching or suggestion in Fujii that it would be advantageous or desirable to replace a shift register with the photodiodes D disclosed therein.

The following statements by the Examiner appear to acknowledge that there is no teaching or suggestion in the cited references to combine them in the manner proposed by the Examiner:

Therefore, it would have been obvious for one having ordinary skill in the art at the time invention was made to modify Maru's printing apparatus to include appropriate optical elements so the printhead assembly can be in optical communication with other components rather than by wiring connection and to include a plurality of junction photosensors into the printhead assembly for receiving optical image data (sic) rather than the S/R [shift register] cells disclosed by Fujii et al. The motivation for doing so would have been well known in the art to avoid many problems due to wiring connection such as disconnection, short circuit, or attenuation (due to resistance of the wiring). *(The applicant please be advised that a suggestion/motivation need not be expressly stated in one or all of the references used to show obviousness, but can be from common knowledge and a common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference (In re Bozek, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969)). (Office Action at para. no. 1, pages 3-4) (italics emphasis in Office Action) (bold emphasis added)*

The Examiner appears to argue above that optical communications are better than wired connections, and then this unsupported opinion apparently provides a basis to combine any arbitrary disclosure in the references in any arbitrary manner. This argument is clearly contrary to established precedent. There must be some teaching or suggestion in the prior art that would have led a person of ordinary skill to combine the references in a way that would produce the claimed invention. For example, in the cases of *In re Fine*, 837 F.2d 1071, 5

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USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), the Federal Circuit reversed the decision of the Board of Patent Appeals and Interferences sustaining an Examiner's obviousness rejection. In the *Fine* case, the Court stated that "[t]he Board points to nothing in the cited references, either alone or in combination, suggesting or teaching Fine's invention." *Fine*, 5 USPQ2d at 1599 (emphasis added). The Court further stated that "Because neither Warnick nor Eads [prior art references], alone or in combination, suggests the claimed invention, the Board erred in affirming the Examiner's conclusion that it would have been obvious to substitute the Warnick nitric oxide detector for the Eads sulfur dioxide detector in the Eads system." *Id.*

Similarly, in the *Jones* case, the Court stated:

We see no such suggestion in Zorayan, which is directed to shampoo additives, nor in Wideman, which teaches that the amine used to make the claimed compound is a byproduct of the production of morpholine. Nor does the broad disclosure of Richter fill the gap, for the reasons discussed above.

**Conspicuously missing from this record is any evidence, other than the PTO's speculation (if it be called evidence) that one of ordinary skill in the herbicidal art would have been motivated to make the modifications of the prior art salts necessary to arrive at the claimed 2-(2'-aminoethoxy) ethanol salt. See *Grabiak*, 769 F.2d at 731-32, 226 USPQ at 872 ("[I]n the case before us there must be adequate support in the prior art for the [prior art] ester/ [claimed] thioester change in structure, in order to complete the PTO's *prima facie* case and shift the burden of going forward to the applicant."); *In re Lahu*, 747 F.2d 703, 705, 223 USPQ 1257, 1258 (Fed. Cir. 1984) ("The prior art must provide one of ordinary skill in the art the motivation to make the proposed molecular modifications needed to arrive at the claimed compound.").**

*Jones*, 21 USPQ2d at 1944 (emphasis added).

Thus, in both of these cases, the Federal Circuit found that there was no suggestion to combine in the references, and the Court reversed the Board's decision. Likewise, in the present case, the Examiner has pointed to nothing in the references that suggests the proposed combination, and has instead relied on the Examiner's unsupported speculation or opinion that optical communications are better than wired connections. The Examiner's argument ignores the fact that optical communications and wired connections each have their own unique strengths and weaknesses, and the Examiner's opinion that one is better than the other does not provide a basis for establishing a *prima facie* case of obviousness.

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Furthermore, the proposed modification to Maru based on Fujii would change the principle of operation of the system disclosed in Maru. The MPEP states that "[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. MPEP §2143.01, citing *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). The MPEP also states that, in the *Ratti* case, "[t]he court reversed the rejection holding the 'suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate.'" MPEP §2143.01, citing *In re Ratti*, 270 F.2d at 813, 123 USPQ at 352. The modification of the printing system disclosed in Maru proposed by the Examiner would require a substantial reconstruction of the printing system, and would change the principle of operation of the printing system.

In view of the above, independent claim 1 is not taught or suggested by Fujii and Maru, either alone, or in combination. Applicant respectfully requests removal of the rejection of claim 1 under 35 U.S.C. §103(a), and requests allowance of this claim. Dependent claims 2-4, 10, 13, and 14 further define patentably distinct claim 1, are further distinguishable over the cited references, and are believed to be allowable over the cited prior art. Applicant respectfully requests removal of the rejection of claims 2-4, 10, 13, and 14 under 35 U.S.C. §103(a), and requests allowance of these claims.

Independent claim 23 recites "a junction photosensor coupled to the ejection element via a latch and a multi-transistor amplifier". Maru does not teach or suggest a junction photosensor coupled to an ejection element via a latch and a multi-transistor amplifier, as recited in independent claim 23. Fujii also does not teach or suggest this limitation. Thus, Maru and Fujii, either alone or in combination, do not teach or suggest each and every limitation of independent claim 23. In addition, as addressed above with respect to independent claim 1, there is no suggestion to combine Maru and Fujii in the manner proposed by the Examiner.

In view of the above, independent claim 23 is not taught or suggested by Fujii and Maru, either alone, or in combination. Applicant respectfully requests removal of the rejection of claim 23 under 35 U.S.C. §103(a), and requests allowance of this claim.

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The Examiner rejected claims 5-8 under 35 U.S.C. §103(a) as being unpatentable over Maru in view of Fujii as applied to claim 4, and further in view of Millman et al., publication entitled, "Microelectronics," Second Edition, McGraw-Hill, Inc., 1987 ("Millman"). As described above with respect to claim 1, Maru and Fujii, either alone, or in combination, do not teach or suggest "a plurality of latches; and a plurality of junction photosensors, each junction photosensor coupled to one of the ejection elements via one of the latches", as recited in independent claim 1. Millman also does not teach or suggest this limitation of claim 1.

In view of the above, dependent claims 5-8, which further define patentably distinct claim 1 and are further distinguishable over the cited references, are believed to be allowable over the cited prior art. Applicant respectfully requests removal of the rejection of claims 5-8 under 35 U.S.C. §103(a), and requests allowance of these claims.

The Examiner rejected claims 11 and 12 under 35 U.S.C. §103(a) as being unpatentable over Maru in view of Fujii as applied to claim 1, and further in view of Sueoka et al., U.S. Patent No. 6,024,439 ("Sueoka"). As described above with respect to claim 1, Maru and Fujii, either alone, or in combination, do not teach or suggest "a plurality of latches; and a plurality of junction photosensors, each junction photosensor coupled to one of the ejection elements via one of the latches", as recited in independent claim 1. Sueoka also does not teach or suggest this limitation of claim 1.

In view of the above, dependent claims 11 and 12, which further define patentably distinct claim 1 and are further distinguishable over the cited references, are believed to be allowable over the cited prior art. Applicant respectfully requests removal of the rejection of claims 11 and 12 under 35 U.S.C. §103(a), and requests allowance of these claims.

The Examiner rejected claim 9 under 35 U.S.C. §103(a) as being unpatentable over Maru in view of Fujii as applied to claim 1, and further in view of Tamura et al., U.S. Patent No. 5,784,463 ("Tamura"). As described above with respect to claim 1, Maru and Fujii, either alone, or in combination, do not teach or suggest "a plurality of latches; and a plurality of junction photosensors, each junction photosensor coupled to one of the ejection elements via one of the latches", as recited in independent claim 1. Tamura also does not teach or suggest this limitation of claim 1.

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In view of the above, dependent claim 9, which further defines patentably distinct claim 1 and is further distinguishable over the cited references, is believed to be allowable over the cited prior art. Applicant respectfully requests removal of the rejection of claim 9 under 35 U.S.C. §103(a), and requests allowance of this claim.

**CONCLUSION**

In view of the above, Applicant respectfully submits that pending claims 1-14 and 23 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 1-14 and 23 is respectfully requested.

No fees are required under 37 C.F.R. 1.16(h)(i). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 08-2025.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application.

Any inquiry regarding this Response should be directed to James R. McDaniel at Telephone No. (208) 396-4095, Facsimile No. (208) 396-3958 or Jeff A. Holmen at Telephone No. (612) 573-0178, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

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**CERTIFICATE UNDER 37 C.F.R. 1.8:**

The undersigned hereby certifies that this paper or papers, as described herein, are being transmitted via telefacsimile to Examiner Nguyen, Group Art Unit 2853, at Fax No. (571) 273-8300 on this 3rd day of March, 2006.

By: Jeff A. Holmen

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